Performance Based Logistics

NDIA Systems Engineering Conference

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Agenda

- Acquisition Issues and Challenges
- Current/Future Weapon System Sustainment
- Product Support and Performance-Based Logistics Policy
- OSD Staff Assistance/Oversight
- R-TOC Pilot Program Examples
- Additional PBL Examples

Summary of Issues and Challenges

Summary of Key Issues

- **There is an urgent need for significant improvements in DoD logistics operations**
  - **Joint Warfighter Capabilities**
  - **New National Defense Strategy**
- **Weapon System sustainment is 80% of current logistics costs**
- **PBL is current DoD approach to implement customer-focused weapon system sustainment**
- **Numerous programs are successfully implementing PBL**
  - **Increased Readiness**
  - **Reduced cost**
  - **Improved performance**

Our Challenge

Key Area	Future	Current Performance
Weapon System Readiness	Immediately employable force option (96 hours)	70-80% mission capable rates
Footprint	50% smaller footprint	600,000 deployable logisticians
Deployment	7-14 days rapidly deployable capability	130+ days (MTW)
Distribution	Global distribution capability	Fractionated system with 7+ accountability hand offs
Information Systems	Responsive to joint Warfighter needs	1,000+ systems

These areas must be addressed based upon a coherent vision/plan and the material needs of our fighting forces and CINCs.

Requirements of the Future Logistics Environment

- **Rapid deployment and sustainment to support the new national defense strategy**
- **End-to-End management of the sustainment pipeline to meet warfighter needs**
  - **Commodities**
  - **Weapon system support**
- **Dramatically reduced deployed footprint**
  - **Weapon sustainment**
  - **Combat support**
- **Smooth material flow with minimal hand-offs**
- **Appropriate information systems to manage the business**
  - **Input/output relationships (matching readiness and cost)**
  - **Credible financial management information**
  - **Decision support systems**

Logistics Roadmap to 2020

Logistics Resources (TY$B)

2002	2003	2004	2005	2006	2007
88.2	87.5	89.5	91.3	93.1	95.4

- Force closure 130+ days (MTW)
- 18-day average Customer Wait Time for spares (83 days for 95%)
- 70-80% mission capable rates typical
- 30-year-old processes
- 680,000 logisticians in operational units (AC/RC)
- 1000+ log IT systems - $3.8B/year
- 15% backordered @ 85 days average
- Emerging public/private integration

Logistics Processes:
- **Independent of scenario and capability**
- **Flexible and agile to respond to an uncertain world**

End-State 2020

Performance Based Logistics
Industrial Partnering for Consumables
Depot Maintenance
Global Distribution Management
Logistics Situational Awareness

Today

- Immediately employable force option for National Command Authority
- Rapidly deployable capability
- Deployment and sustainment in anti-access environment
- 50% smaller footprint
- Improved in-theater combat support and prepositioning
- Responsive management of support to the joint warfighter
- Incorporation of commercial advances
- Global industrial base for global distribution

2000 **2010** **2020**

Current/Future Weapon System Sustainment

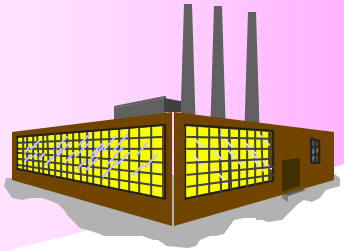
Where We Are

BUY WEAPON SYSTEMS

$95B/Year
- Design
- Develop
- Build

CATALOG PARTS

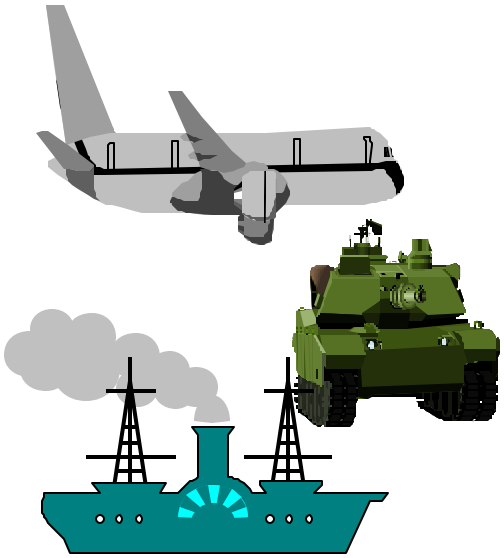
- 5M NSNs



MANAGE PARTS

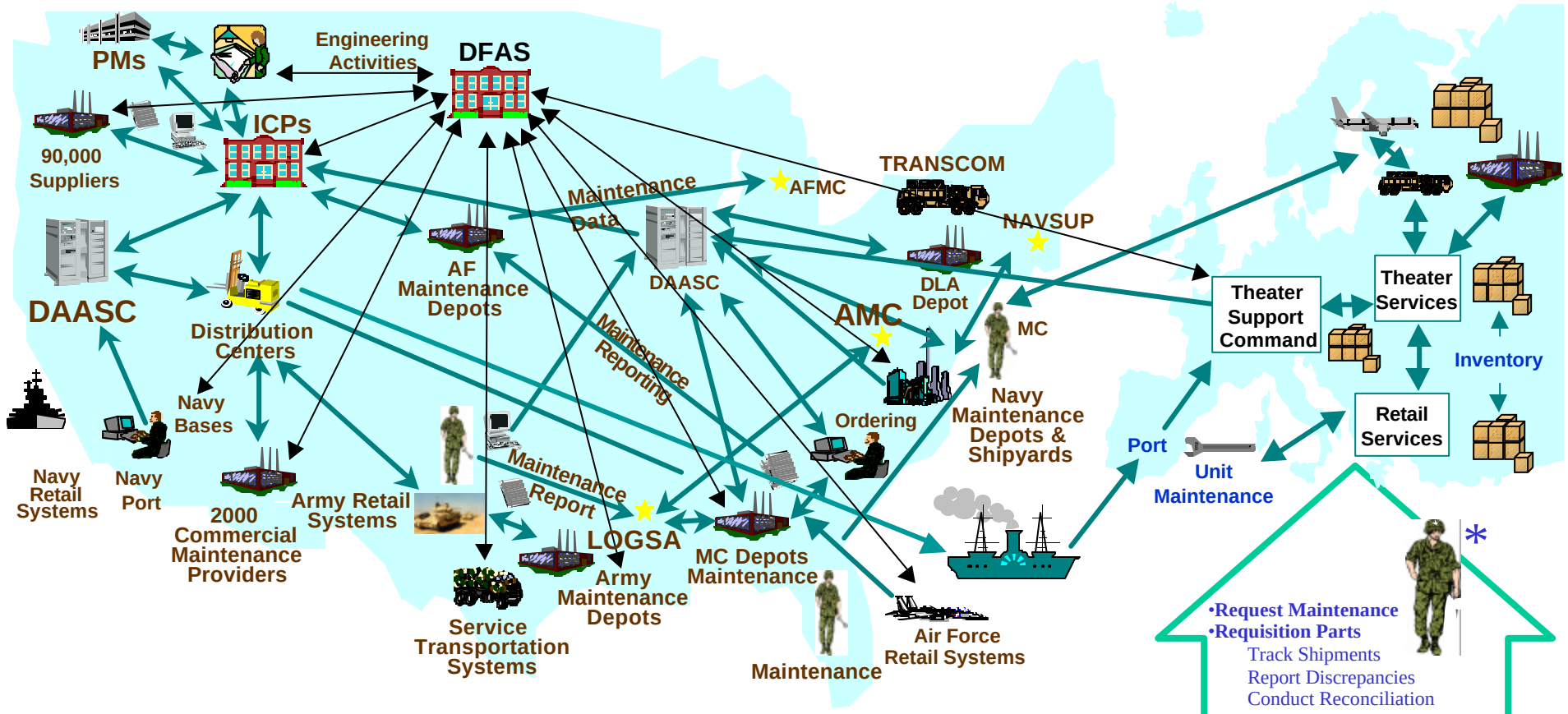
$62B/Year
- Finance
- Buy
- Manage
- Move
- Maintain

FIGHT WITH WEAPON SYSTEMS



Multiple Handoffs

Current Process

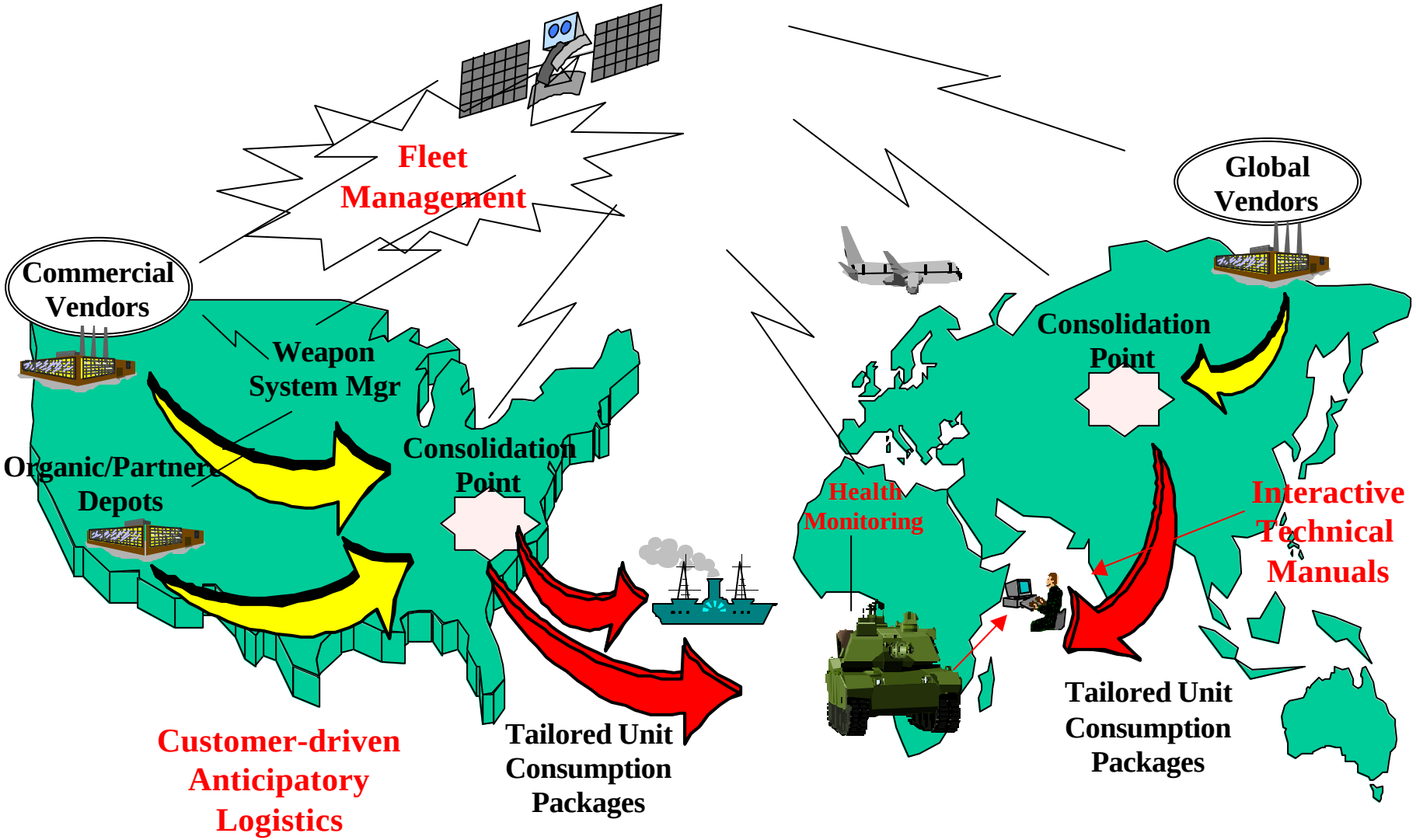


*Retail depiction based on Army example; retail processes reflect Service unique requirements and procedures.

Performance-Based Logistics

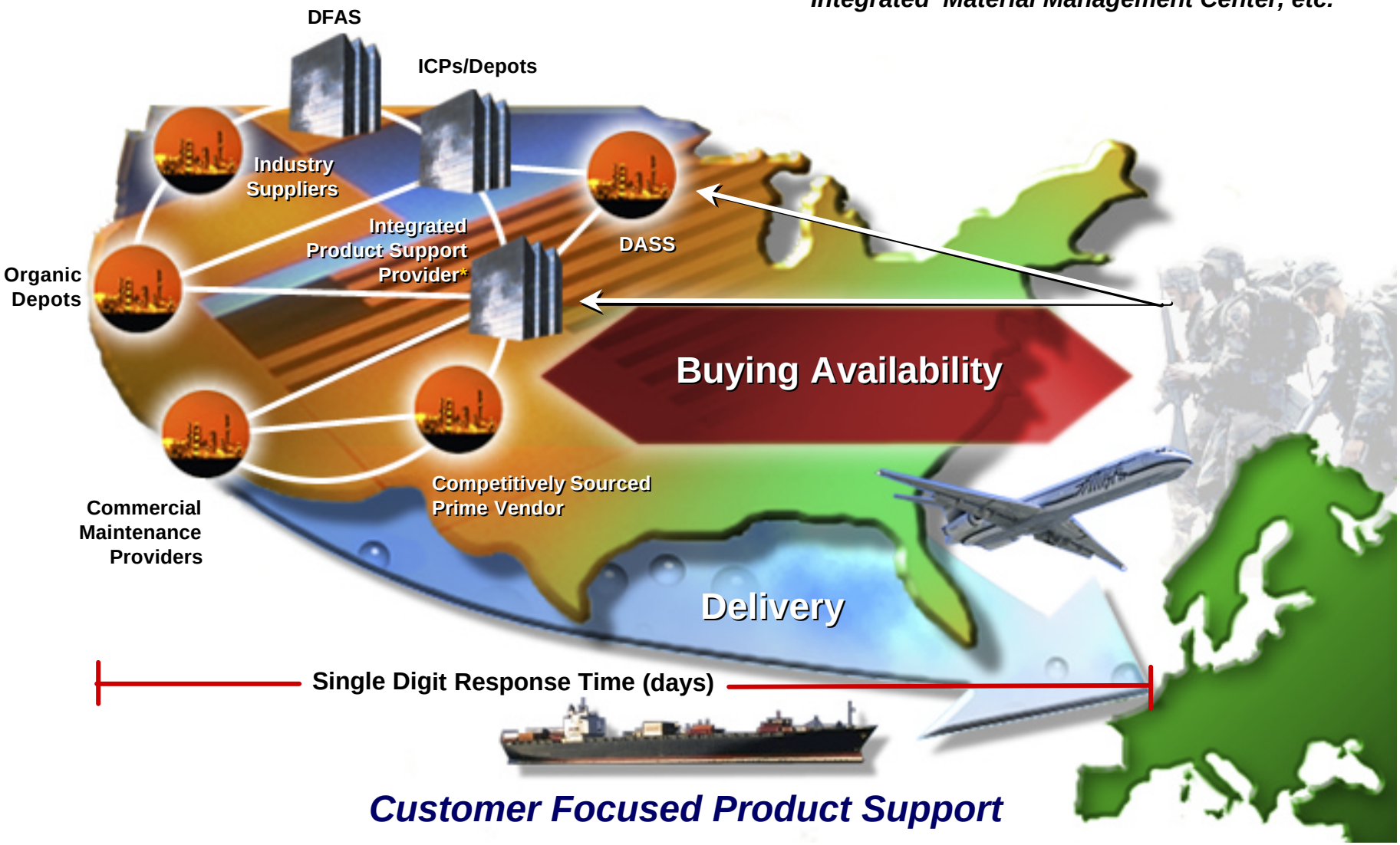
- **Program Manager is responsible for life cycle support**
  - **PM manages integrated logistics chain**
  - **DoD sustainment commands foster transparency and interoperability**
- **Performance agreements negotiated with operational customers**
- **PM builds performance agreements with organic providers**
- **National ownership of material and services to the point of consumption — eliminate requisitions**
- **Logistics and financial transactions transparent at the operational level**
- **Outcome performance measured throughout the process**
- **Employ health monitoring technology to maximize supportability and readiness of major systems**
  - **Maintenance data reported without human intervention**

Performance-Based Logistics



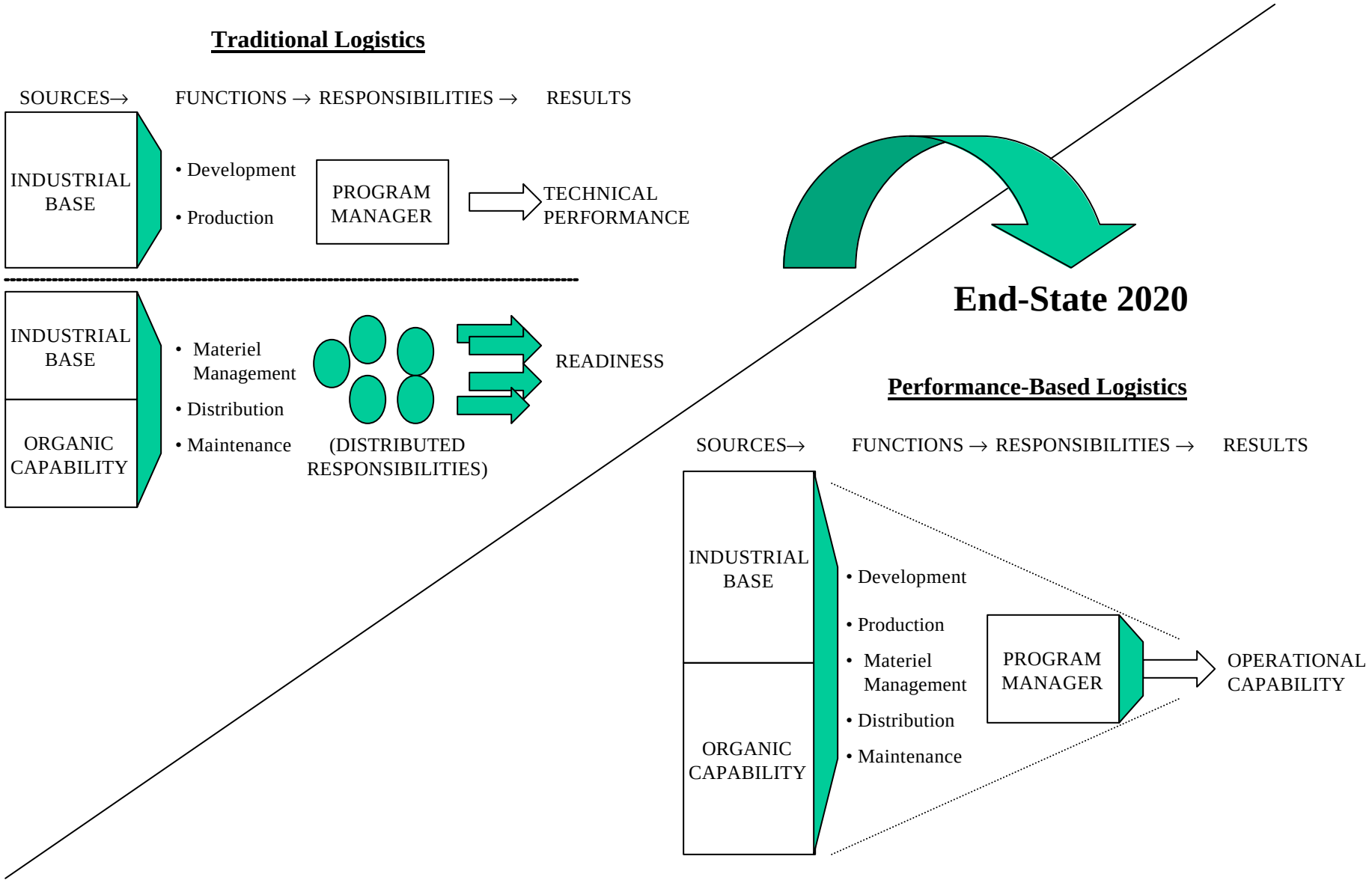
Performance-Based Logistics

Unique to each Service; Program Manager, Integrated Material Management Center, etc.

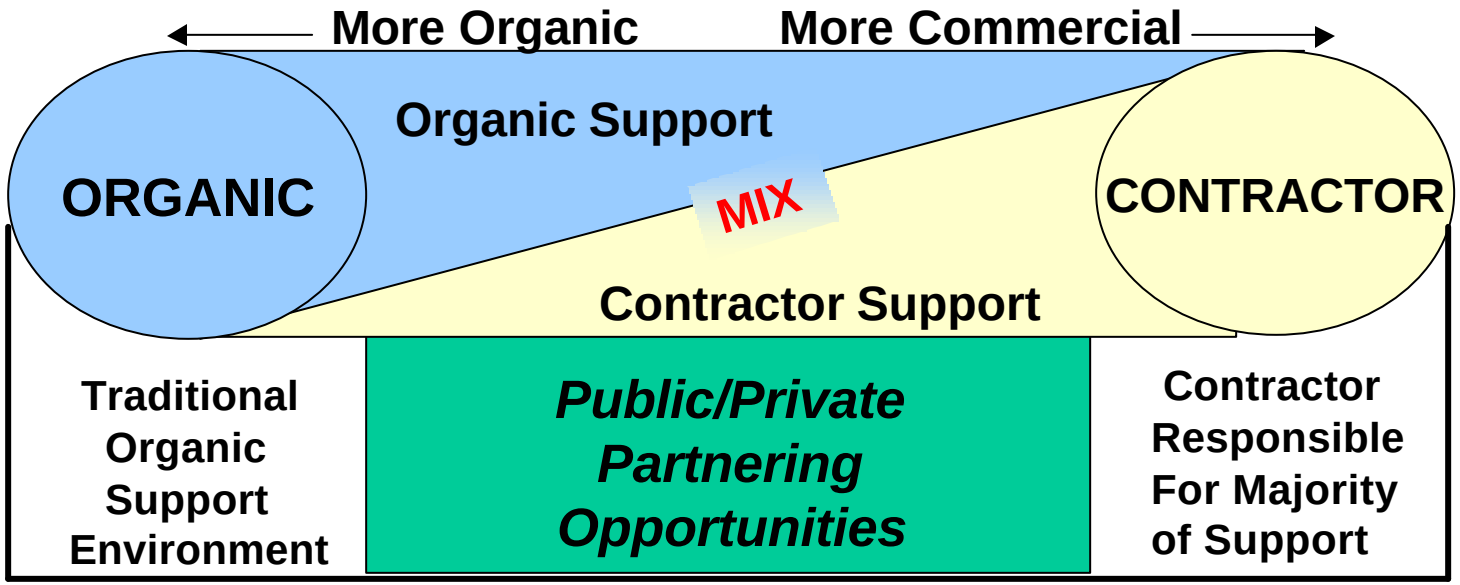


Customer Focused Product Support

Performance-Based Logistics Application



Spectrum of PBL Strategies



PBL strategies will vary along this spectrum depending on:

- **Age of System (Phase in Life Cycle)**
- **Existing Support Infrastructure**
- **Organic & Commercial Capabilities**
- **Legislative and Regulatory Constraints**

Examples:

- **Total System Performance Responsibility (TSPR)**
- **Industry Partnering**
- **Service Level Agreements**
- **Performance-based Agile Logistics Support (PALS)**
- **Prime Vendor Support (PVS)**
- **Contractor Delivery System (CDS)**
- **Performance Plans**
- **MOU with Warfighter**

PS/PBL Policy

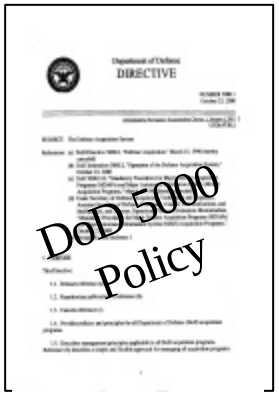
Implementing Performance-Based Logistics

Oversight via R-TOC Forum

Reengineer Product Support

30 Pilot Programs

Operational Demonstrations



Lessons Learned

Adjustments

- **Workforce Development**
- **Industry Outreach**

Product Support Guide

Oversight via DAB/DAES

New program implementation

- **F-18 E/F**
- **F-22**

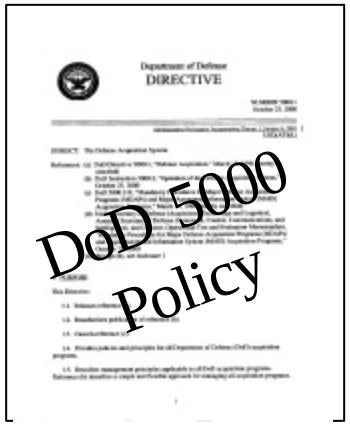
AlliedCoordination

- **NATO**
- **ADAC**
- **Bi-lateral exchanges**

An integrated, disciplined program to achieve near-term implementation.

Performance-Based Logistics Policy and Guidance

- **Product Support Reengineering**
- **Life Cycle Management Policy**
- **PBL Guide**



These and related resources can be located at:

http://www.acq.osd.mil/log/new_lpp/ps/prod_suprt.htm

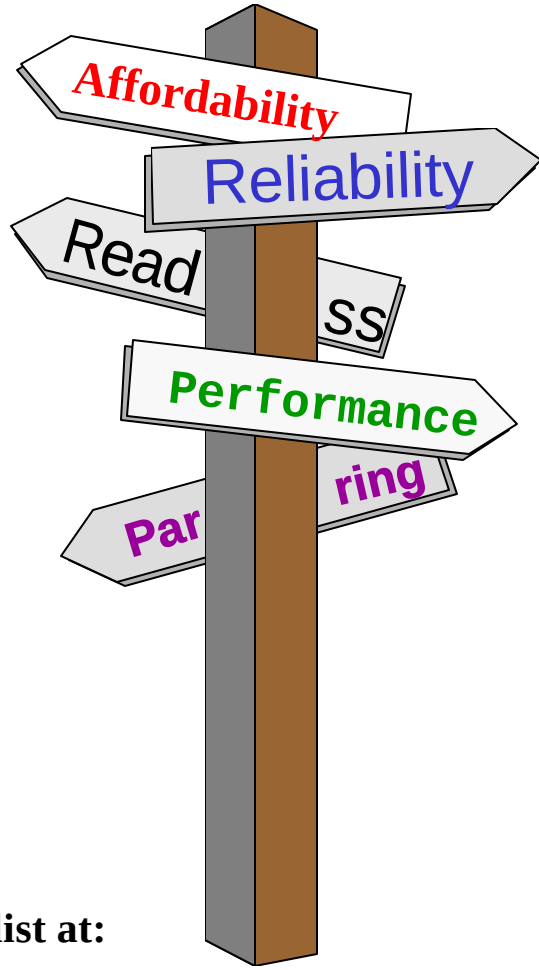
A Tool for Program Offices

- **Provides guidance on implementation of DoD 5000 Product Support Policy**
  - **Translates concepts of Product Support Initiatives**
  - **Methodology for Implementing PBL**
- **Features:**

Chapter 1: New Directions in Product Support
Chapter 2: Implementing PBL
Chapter 3: Buying Performance
Appendix A: RTOC Pilot Programs
Appendix B: Tools and Databases
Appendix C: DoD and Service Guidance
Appendix D: Statutory Requirements

The Product Support Guide Answers Your Questions

- **What is PBL?**
- **How do I buy performance?**
- **How do I develop a Product Support Strategy?**
- **How do I ensure long-term PBL success?**
- **How did the Pilot Programs implement PBL?**
- **What are the related Statutory Requirements?**
- **How do I develop PBL metrics?**
- **What other Service and DoD Guidance is available**?



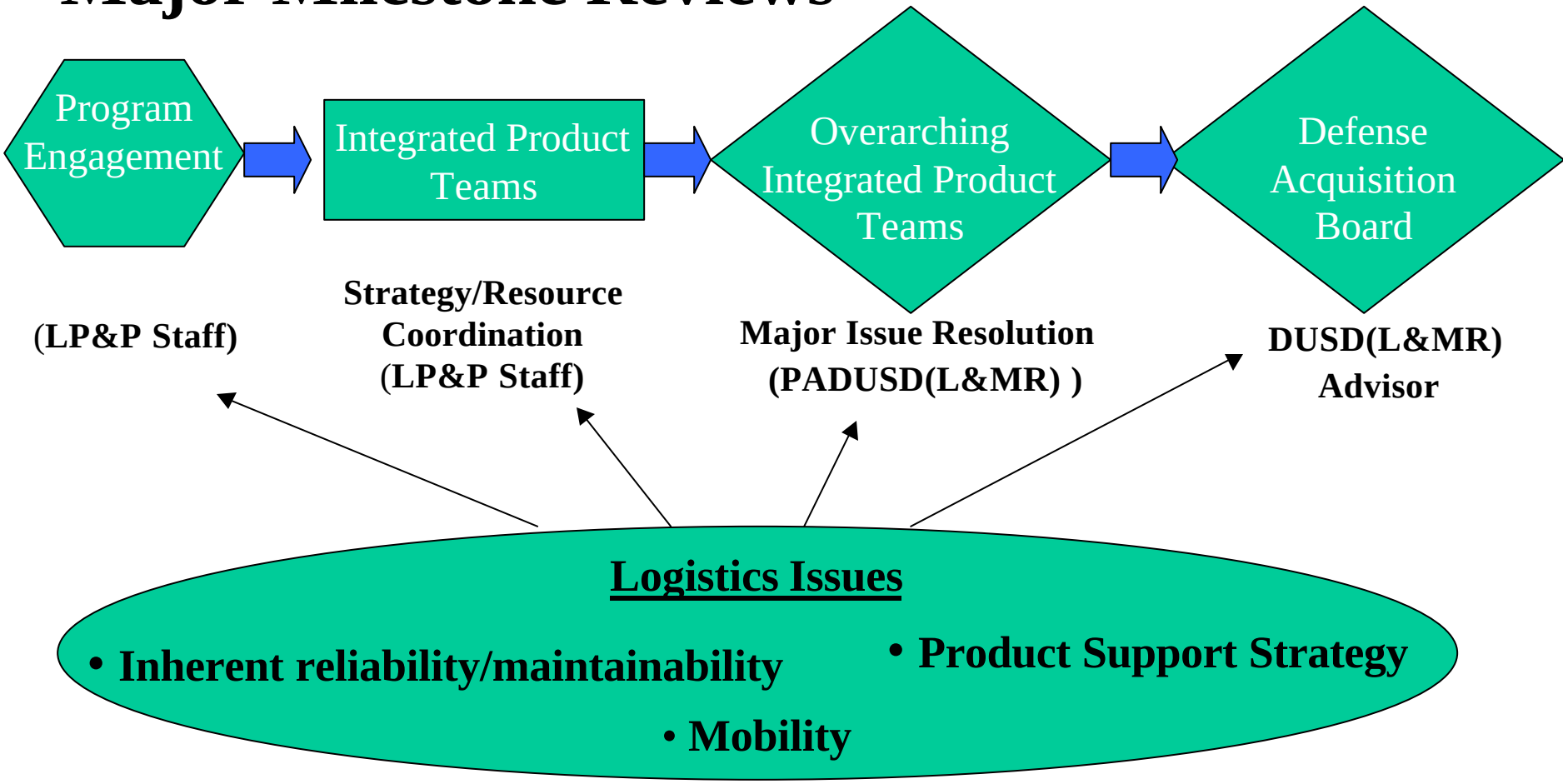
For assistance in PBL Implementation, see Contact list at:

http://www.acq.osd.mil/log/new_lpp/ps/prod_suprt.htm

OSD Staff Assistance/Oversight

Logistics Assessment of Major Systems

Major Milestone Reviews



Product Support Objectives

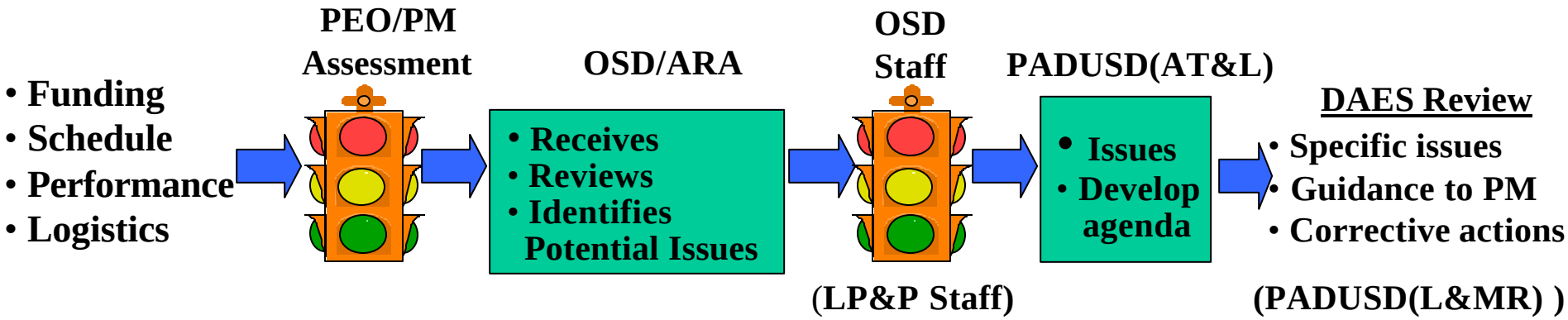
- **Deployability/Mobility**
- **Footprint**
- **Inherent reliability**

} **Reduce Demand**

- **Overall Product Support Strategy**
  - **Readiness objectives**
  - **Performance Based Logistics**
  - **Support Integration**
- **O&S Costs**

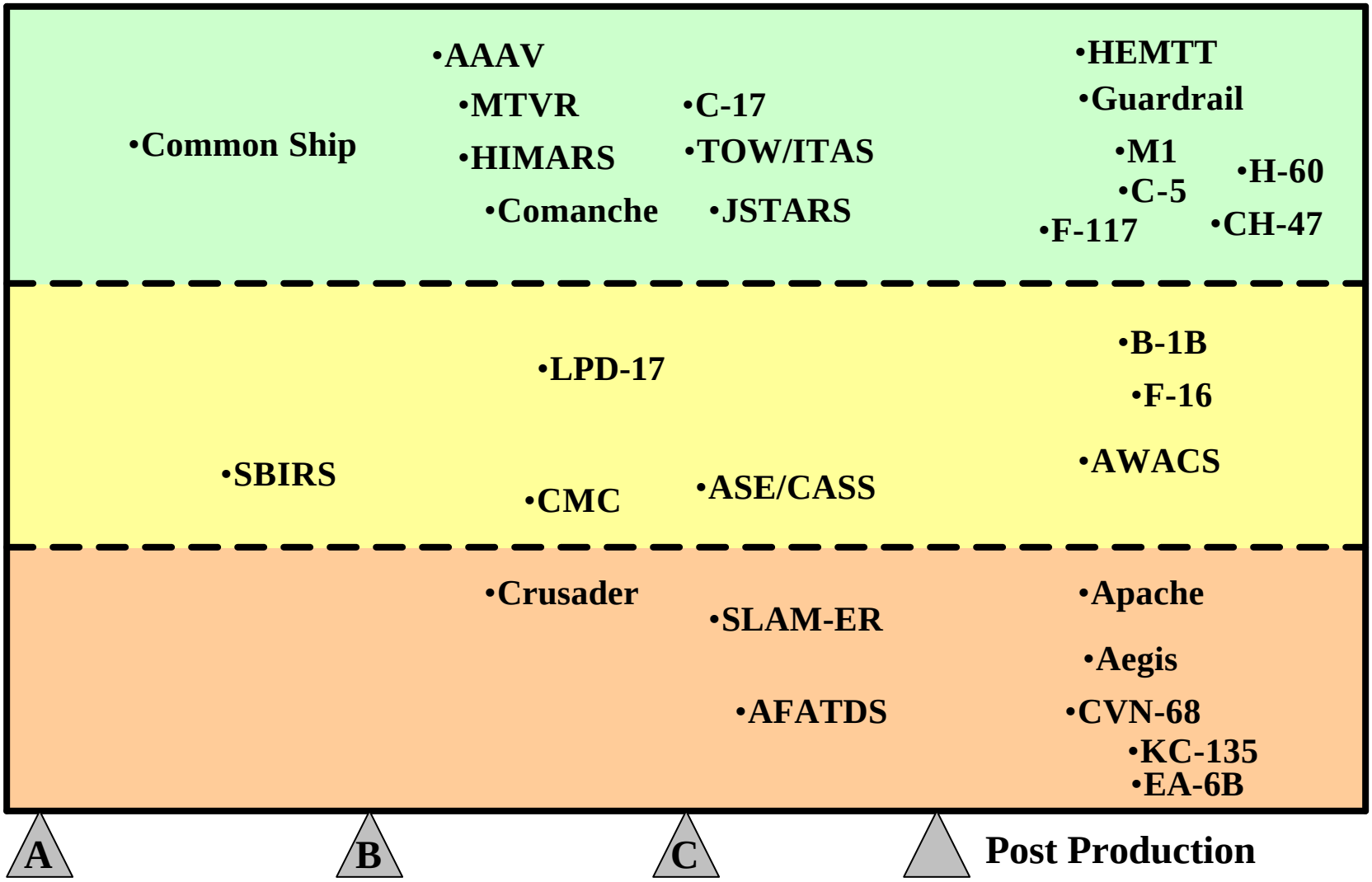
Logistics Assessment of Major Systems

Quarterly Assessments:
Defense Acquisition Executive Summary



R-TOC Pilot Program Examples

Pilot Programs



SYSTEM MATURITY

PBL Successes

Exploiting integrated industrial logistics chains to optimize equipment readiness

H-60 R-TOC Pilot

- Estimated $400M RTOC
- Increase parts availability rate from 73% to 90%
- "No cost" reliability improvements
  - -50% increase MTBF on FLIR
- Government-Industry Partnership

F-117 Total System Performance Responsibility (TSPR)

- Support to 49th Fighter Wing rated Excellent
- All performance metrics met or exceeded
- Savings/cost avoidance in FY 99 - $27.5M
- F-117 withstood test of transition and overseas deployment to 2 combat locations
  - In Kosovo, F-117 flew 1023 sorties with a mission capable rate of 86%

M-1 Abrams R-TOC and Product Support Pilot

- Reduction of total ownership costs of 20% by FY 05
- Potential of $17B O&S cost reduction over the 30-year remaining life
- Partnership among PM, industry, and Army Materiel Command

Advanced Amphibious Assault Vehicle (AAAV) Life Cycle Support

Estimated $240M Cost Avoidance over life cycle

- Embedded Training
- PM Life Cycle Oversight
- Competitive sourcing

Improved Target Acquisition System

TOW/ITAS Maintenance Concept

Field Repair

- **Soldier Maintainer at Organizational and Direct Support Levels**
  - **BIT/BITE to Line Replaceable Unit (LRU)**
  - **Repair by Replacement**
- **Contractor Forward Repair Activity (FRA)**
  - **Limited Depot Level Repair and Test Equipment**
  - **Co-located With Army Main Support Battalion at Selected Units**
  - **FRA (Personnel and Equipment) Deployable, Commander's Call**
    - **On Unit's Load Plan**
    - **2 Hour Recall - Has Shots, Wills, Personal Equipment**

Depot Repair - Raytheon, McKinney, TX

TOW/ITAS Supply Concept

Inventory Management - Contractor's Responsibility

- **Provisions, Owns, Maintains Inventory of Spares**
- **Determines Requirements**
- **Captures Demand History**

Spares - Free Issue to the Units

- **Initial Spares Provided to Units**
- **Replenishment**
- **Free Transportation To / From Depot**

Standard Army Information System

- **Interface With SARSS**

ITAS CLS Uses The Army's Standard Supply System

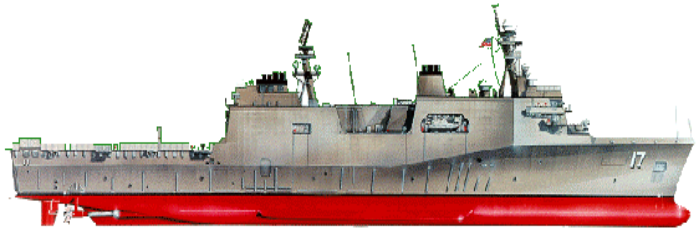
AAAV

Best Commercial Practices Implemented

- Customer Focused Strategy
- Competitively Sourced Product Support
- EPV/VPV
- Modernization Through Spares
- Strategic Sourcing
- Integrated Supply Chains

LPD-17 Life Cycle Support Strategy

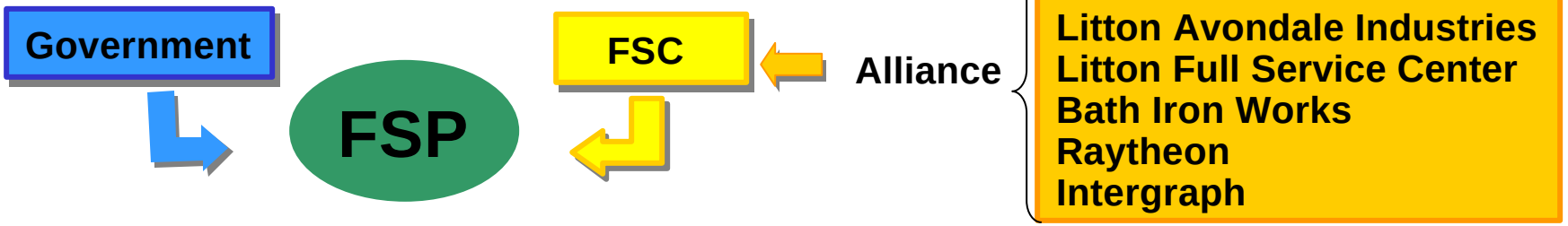
Full Service Partnership (FSP)



Consisting of <u>Government and Industry</u>,

… Operating in a <u>TOC</u> conscious <u>IPT/IPPD</u> Environment, with

… Industry referred to as a <u>Full Service Contractor</u> (FSC) and



… Functions, Responsibilities and Key Processes detailed in a Life Cycle Engineering & Support <u>Management Plan</u> (LCE&SMP) which are

… Validated through <u>Best Value Analyses (BVA)</u>.

First Naval Ship to Focus on Total Ship Approach

LPD 17 Life Cycle FSP Roles & Responsibilities

NAVSEA
USMC
NSWC
TYCOM
SHIP
SPAWAR
NAVICP
SURFLANT
SURFPAC
OPNAV
CNET
NAVSUP

NAVY/GOV'T

- Program Direction
- Requirements Determination
- Performance Contract Management
- Product/Service Acceptance
- Technical Authority
- Funding
- Security
- Legacy Systems/Equipment Support
- Stewardship of FSP Performance

FSC

- Total Ship System Engineering
- Class Planning Yard (M&M)
- Configuration Data Management
- Homeport Management Team
- Next Generation PBL for unique CFE systems/equipment
- TSTS support
- IPDE support
- TOC Reduction

LAI
RAYTHEON
BIW
LSS-FSC
INTERGRAPH

Build on Core Skills

Additional PBL Examples

PBL Objectives Met By Recent Program Initiatives

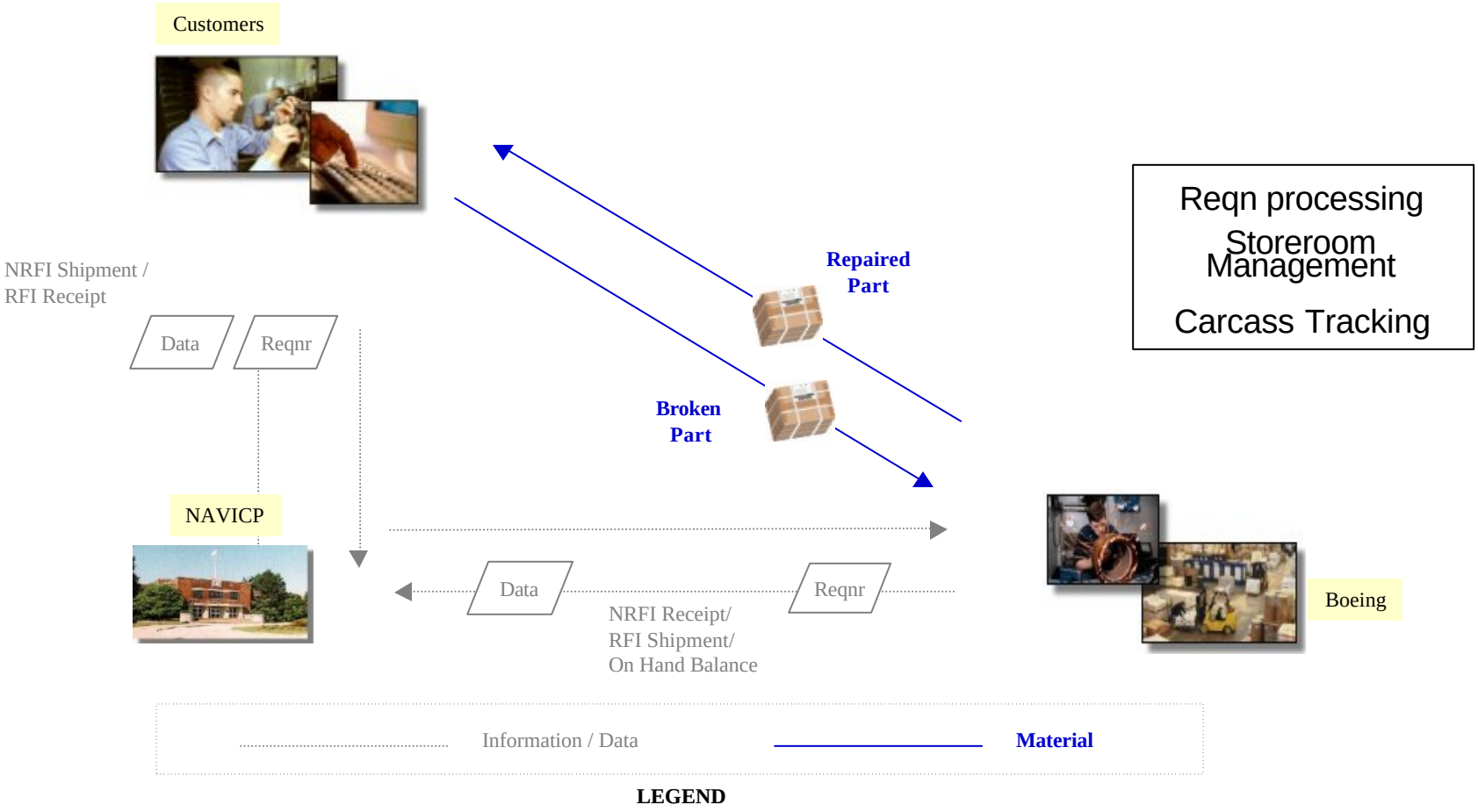
	Improved Performance	Increased Readiness	Partnering	Single Face to Customer	Affordability
F/A-18 FIRST	✓	✓	✓	✓	✓
Sentinel	✓	✓	✓	✓	
F-22	✓	✓	✓		✓
APU-TLS		✓	✓	✓	✓
OTHER PROGRAMS					

F/A-18 E/F USN/Industry Partnership

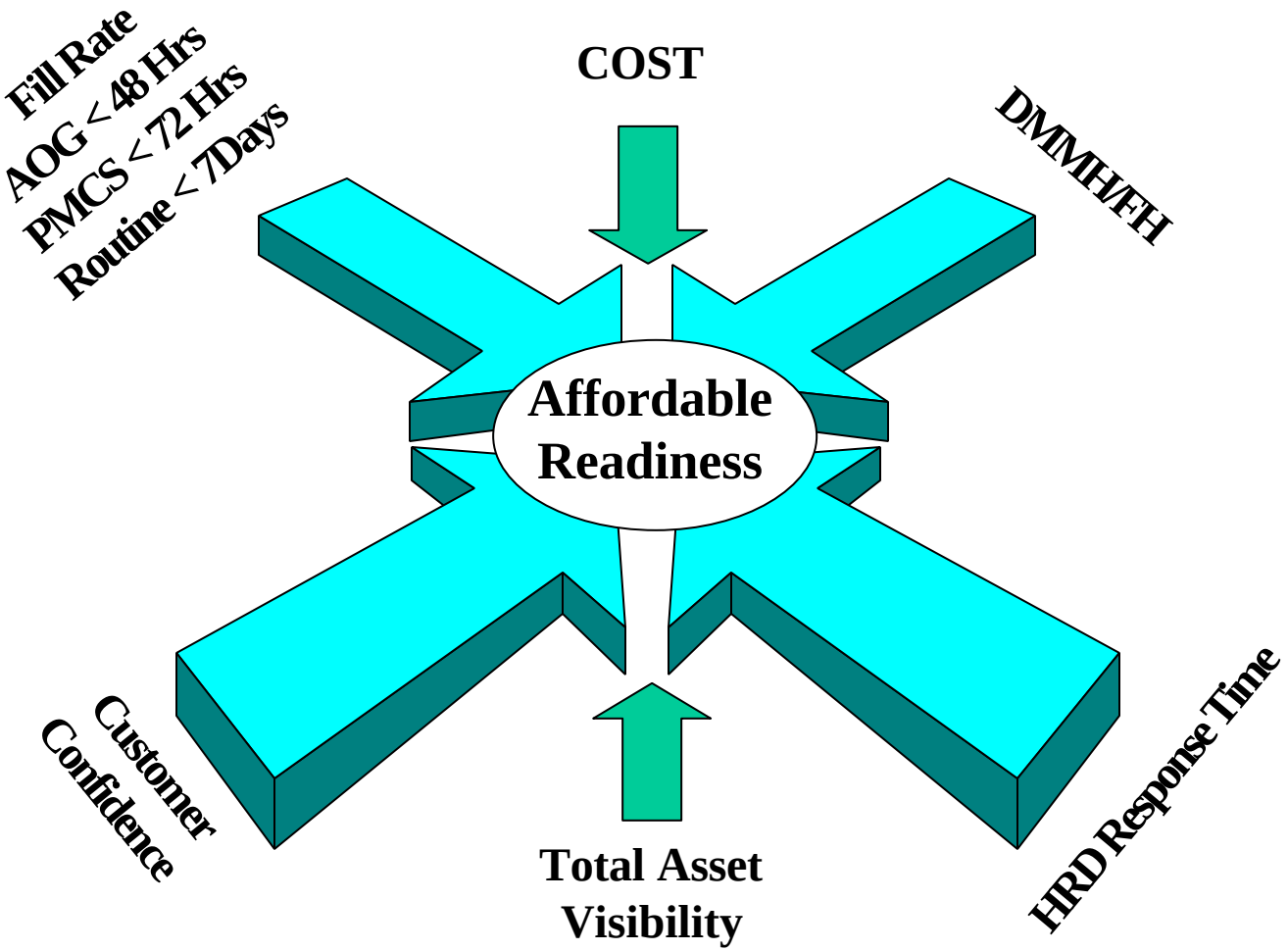
Leverage commercial and DoD best practices

F/A-18 E/F Material Support

The process is transparent to the customer consistent with the tenets of the integrated supply system.



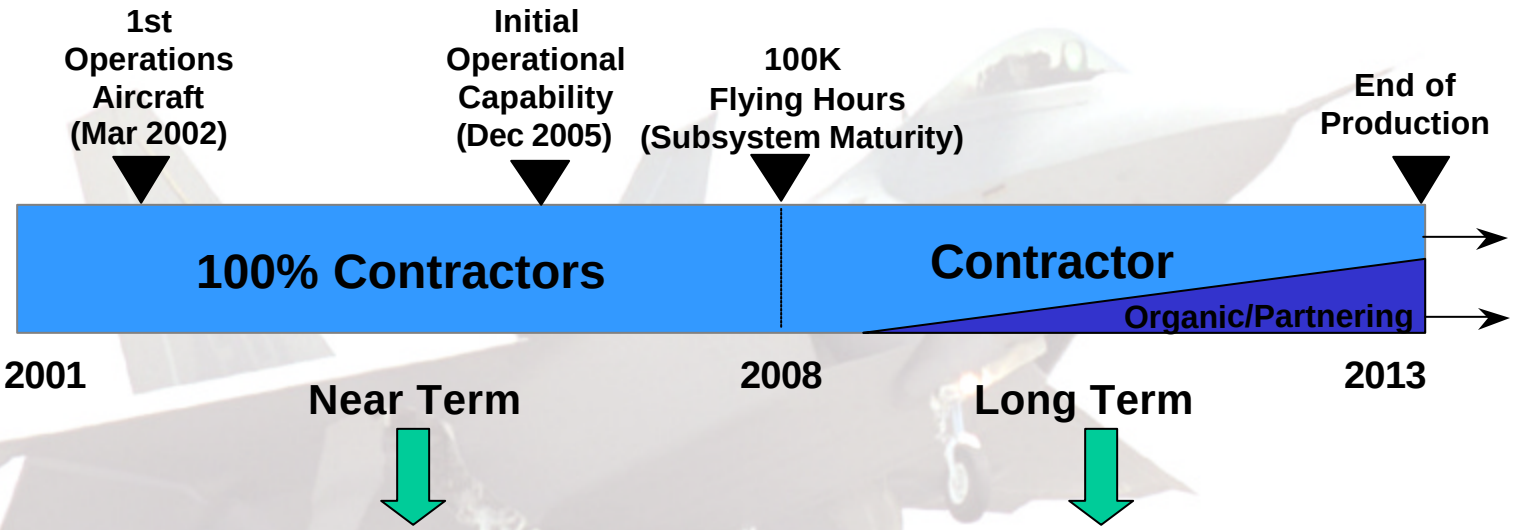
FIRST Performance Requirements - Designed To Meet Fleet Requirements



Managed - Measurable Team Performance

F-22 Near-Term Support Strategy

Performance-based Agile Logistics Support (PALS)

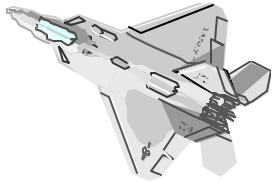


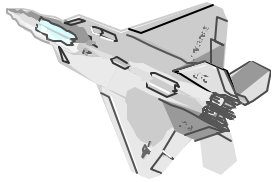
- Achieves early efficiencies by integrating support with production
- Defers organic depot decisions until requirements/ usage are understood

- Decision considerations
  - Contractor Performance
  - Statute
  - AF depot strategy
  - System maturity
  - Best value

F-22 Near-Term Support Strategy

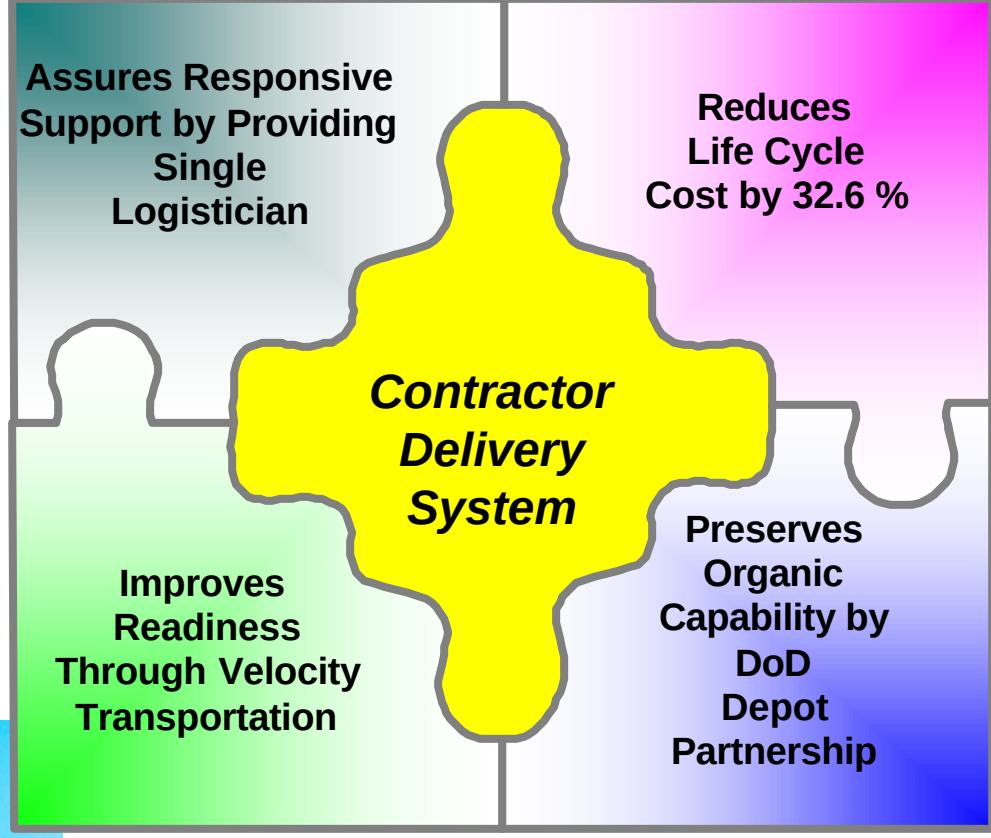
P Performance-based
A Agile
L Logistics
S Support





- **Agile Logistics**
  - **Leverage information technology**
  - **Centralized Asset Management**
  - **Rapid transportation**
  - **Just-in-Time versus Just-in-Case**
  - **Customer “Pull” supply system**
- **Plus**
  - **Integrated flight test, production, and support**
  - **Original equipment manufacturer responsible for their products**

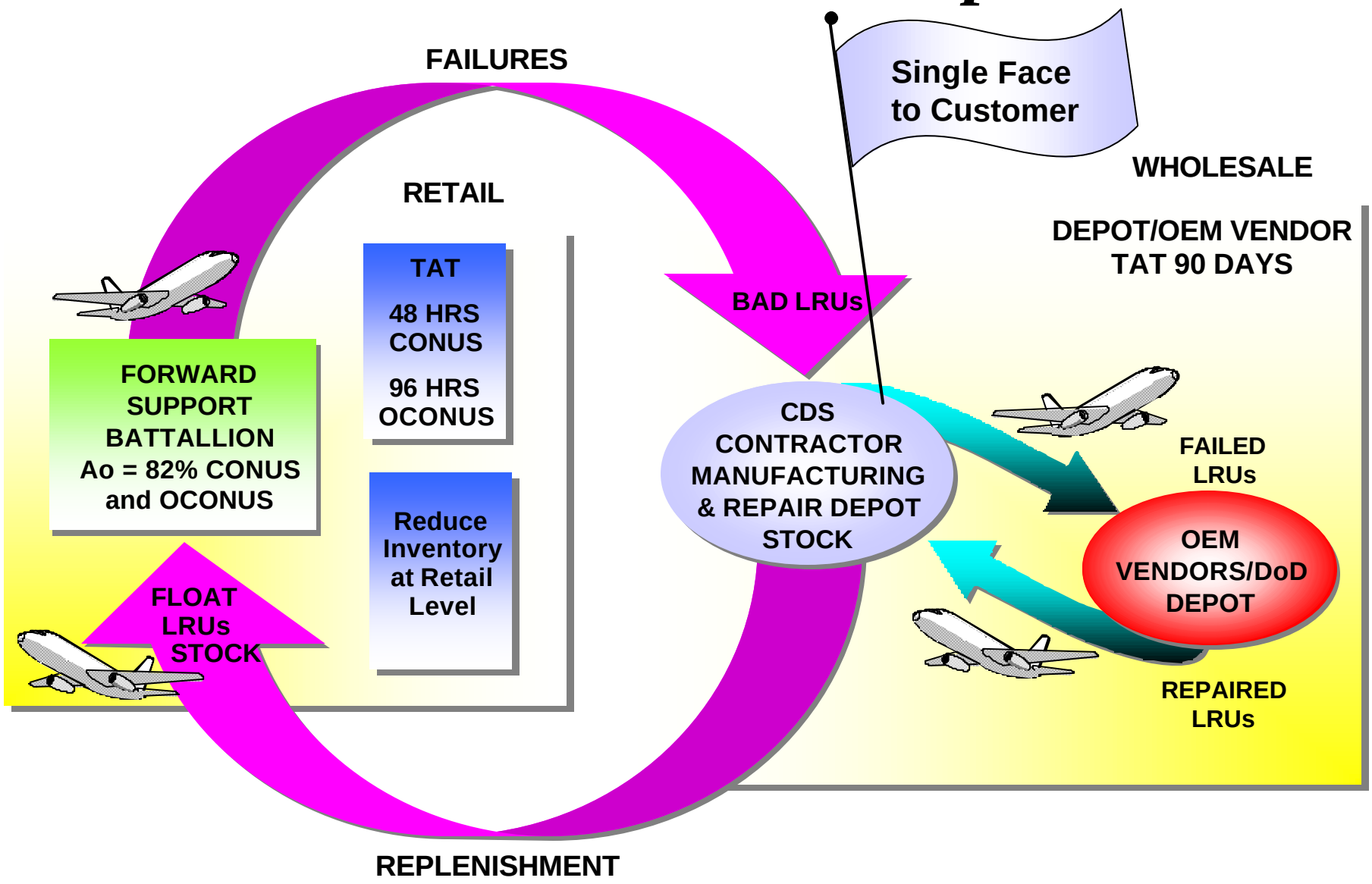
Sentinel: Benefits of Contractor Delivery System



Reduced Costs

Improved Readiness

Sentinel CDS Concept



Support Responsibilities

Government Functions

Maintain Oversight and Control

- **Requirements**
- **Retail Supply**
- **Financial Management**
- **Contract Management**
- **Performance Specification**
- **Training**

CDS Functions

- **Wholesale Supply**
- **Transportation Operations**
- **Logistics Program Management**
- **Systems Engineering**
- **Logistics Engineering**
- **Configuration Management**
- **Repair**
- **Overhaul**
- **Inventory Management**
- **Interface to Gov't Log System**
- **Control Over Vendors**
- **Provisioning**
- **Publications**
- **Supply Operations**

Existing Retail System

- **Organizational Maintenance**
- **Organizational Supply**
- **DS Maintenance (GFE)**

Auxiliary Power Unit Partnership

- Supports C-2, F/A-18, S-3 and P-3.
- Public / Private Partnership
  - Honeywell... Program Management
  - NADEP Cherry Point... Sub-contractor performing touch labor
- 25% - 45% Reliability Improvement
- Delivery Guarantees... 2 Days (IPG 1)
- Obsolescence Management
- Surge Capability...120% of Annual FH's
- Product Support Engineering
- 10-Yr Performance Based, Firm Fixed Price (5 year base & 5 one-year options

Title 10 Compliant!

Buying Reliability and Service Not Piece Parts

NAVICP  Honeywell

PLUS: CAT Logistics

On-Line Shipping & Inv Mgmt

Logistics on Demand: NO EXCUSES!

Don’t our sons and daughters deserve it?